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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,740	12/05/2003	David Allen	ST8653US.CIP1	1326
22203	7590	08/11/2004	EXAMINER	
KUSNER & JAFFE HIGHLAND PLACE SUITE 310 6151 WILSON MILLS ROAD HIGHLAND HEIGHTS, OH 44143			HE, AMY	
			ART UNIT	PAPER NUMBER
			2858	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/729,740

Applicant(s)

ALLEN ET AL.

Examiner

Amy He

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/5/04, 5/3/04, 7/16/04
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 2 and 3 are objected to because of the following informalities:
  - (1) Claim 2 should not depend from itself. Replace "2" (on line 1) with --1--.
  - (2) Claim 3, line 2, delete "for" before "means for".

Appropriate corrections are required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5 and 13-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Matter et al. (U. S. Patent No. 6, 614, 242).

Referring to claims 1-2 and 13-14, Matter discloses a contaminant detecting system/method (in Figures 2 and 4a-4b) for determining the presence of a contaminant (oil) in a fluid (oil and water mixture), comprising:

a capacitor having first and second conducting plates ( plates of the capacitor as shown in Figure 2; or 14 and 15 in Figure 4a-4b), said fluid (oil and water mixture) being a dielectric therebetween; and

sensing means includes a sensing circuit (capacitive measuring cell 12 in Figures 2 and 4a-4b) for sensing a change in capacitance, said change in the capacitance varying according to the presence of the contaminant (oil) in the fluid (claims 3 and 8).

Referring to claims 3 and 15, Matter discloses a means (capacitive measuring cell 12 in Figures 2 and 4a-4b) for generating a digital value indicative of an input capacitance (capacitance signal for inputting to the control 19, see claims 3 and 8).

Referring to claim 5, Matter discloses a control means (MCS 19 in Figures 2 and 4a-4b) for receiving a measured value (capacitance signal, see claims 3 and 8) from said sensing means indicative of the electrical property of said capacitor.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matter et al. (U. S. Patent No. 6, 614, 242), in view of Philipp, "*Charge Transfer Sensing*".

Referring to claim 4, Matter discloses a means (capacitive measuring cell 12 in Figures 2 and 4a-4b) for generating a digital value indicative of an input capacitance (capacitance signal, see claims 3 and 8). Matter does not specifically disclose that said means is selected from a charge-transfer capacitance sensor IC or a capacitance-to-

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digital-converter. Philipp discloses a charge-transfer capacitance sensor IC. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Matter to use a charge-transfer capacitance sensor IC, as taught by Philipp, for obtaining capacitance measurement values in the range of low picoFarad or femotoFarad.

4. Claims 6-12 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matter et al. (U. S. Patent No. 6, 614, 242), in view of Rounbehler et al. (U. S. Patent No. 5, 470, 754).

Referring to claims 6-8 and 16-18, Matter discloses a measurement and control system (MCS 19 in Figures 2 and 4a-4b). Matter does not specifically disclose that the control system includes means for comparing said measured value with a threshold value to determine whether a miscible contaminant is present in the fluid if the measured value is greater/less than the threshold value. Roundbehler discloses a control system including means for comparing a value with a threshold value to determine whether a contaminant is present. A person of ordinary skill in the art would find it obvious to modify Matter to disclose a control system including means for comparing the measured value with a threshold value, as taught by Rounbehler, to determine the presence of a miscible contaminant in the fluid if the measured value is greater/less than the threshold depending on the different threshold used, since the user may prefer to know the presence of a certain contaminants, other than their concentration.

Referring to claims 10-11 and 19-20, Matter discloses a contaminant detecting system as in claim 5. Matter does not specifically disclose that the control means includes means for detecting a spike in said measured value to determine whether an immiscible contaminant is present in the fluid. Roundbehler discloses a control means includes means for detecting a spike to determine a presence of a contaminant. A person of ordinary skill in the art at the time of the invention would find it obvious to modify the control system of Matter to include a means for detecting a spike to determine whether a contaminant is present, as taught by Roundbehler, in order to determine the presence of certain contaminant, since it has been held to be within the general skill of a worker in the art to select a known tool for a known purpose on the basis of its suitability for the intended use as a matter of obvious design choice *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA).

Referring to claims 9,12 and 21, Matter in view of Roundbehler discloses a contaminant detecting system according to claims 6 and 11, wherein the contaminant is oil. Matter in view of Roundbehler does not specifically disclose that the contaminant is a miscible contaminant selected from the group consisting of: blood, urine, soap, detergent, antimicrobial chemical, and miscible soil, or a immiscible contaminant selected from a group consisting of: dirt, bone matter, skin, organ tissue, and immiscible soil. It would have been obvious to a person of ordinary skill in the art at the time of the invention to further modify Matter to substitute oil with contaminant selected from the group consisting of: blood, urine, soap, detergent, antimicrobial chemical, miscible soil, dirt, bone matter, skin, organ tissue, and immiscible soil, so as to determine the

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concentration of these contaminants with a high measuring accuracy and a reduced device maintenance requirement.

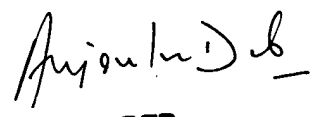
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (571) 272-2230.

The examiner can normally be reached on 9:30am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

AH   
August 4, 2004

  
**ANJAN DEB**  
**PRIMARY EXAMINER**